

Re Item V.

- 1 The following documents are referred to in this communication:
- D1 : PATENT ABSTRACTS OF JAPAN vol. 1999, no. 09, 30 July 1999 (1999-07-30) &; JP 11 115101 A (TOYO TIRE &; RUBBER CO LTD), 27 April 1999 (1999-04-27)
- D2 : US 6 280 546 B1 (HOLLAND JOHN E ET AL) 28 August 2001 (2001-08-28)
- D3 : GB-A-1 486 122 (SEA LOG CORP) 21 September 1977 (1977-09-21)

- 2 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document):
- An abrasion-resistant skirt material for use with air cushion vehicles having at least one air chamber (see paragraph [0003] in the patent application publication), said sheet material comprising:
- a) a fabric base (1);
  - b) a bonding layer (2), comprising a thermoplastic material bonded to the fabric base (1);
  - c) an outer layer (3), comprising a rubber compound bonded to the bonding layer (2).

From this, the subject-matter of independent claim 1 differs in that the fabric base comprises yarns of an ultra-high molecular weight polyethylene.

- 2.1 The subject-matter of claim 1 is therefore novel (Article 33(2) PCT)
- The problem to be solved by the present invention may be regarded as that of improving the mechanical qualities and resistance of the skirt material.

- 2.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

Although the superior mechanical qualities of ultra-high molecular weight polyethylene were previously known (see D2), it had not been previously proposed to adapt it to this particular technical field of materials for air cushion vehicle skirts. More importantly, the use of UHMWPE fibres in the configuration of D1 appears to have the unexpected advantage of creating a particularly solid bond between the otherwise difficult to handle UHMWPE fibres and the elastomeric outer layer.

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2.3 Claims 2-14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

- 3 Document D2, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document):
- A lightweight, abrasion-resistant sheet material, comprising:
- a) a fabric base (52), comprising yarns of an ultra-high molecular weight polyethylene;
  - b) a layer (50), comprising a thermoplastic material bonded to the fabric base (52).

From this, the subject-matter of independent claim 15 differs in that it also comprises an outer layer, bonded to the fabric base by the thermoplastic layer, and comprising a rubber compound.

- 3.1 The subject-matter of claim 15 is therefore novel (Article 33(2) PCT)  
The problem to be solved by the present invention may be regarded as that of improving the abrasion resistance of the sheet material.
- 3.2 The solution to this problem proposed in claim 15 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
- Although the use of a rubber coating has been previously suggested for improving the abrasion-resistance of sheet materials (see D3, p.2, lines 40-44), its application in the present configuration appears to create an unexpectedly good bond between the UHMWPE fibres and said rubber layer.
- 3.3 Claims 16-28 are dependent on claim 15 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

- 4 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document):

A method for forming an abrasion-resistant sheet material, the method comprising the steps of:

- a) overlaying a layer (3) of an uncured rubber to a coated fabric, the coated fabric comprising:
  - i) an inner fabric base layer (1);
  - ii) an outer bonding layer (2) comprising a thermoplastic material bonded to the inner fabric base layer (1); and
- b) heating the uncured rubber (3) and coated fabric at a sufficient temperature and for a sufficient length of time so as to bond the layer of uncured rubber compound to the thermoplastic material and to cure the rubber compound.

From this, the subject-matter of independent claim 29 differs in that the inner fabric base layer comprises yarns of an ultra-high weight average molecular weight polyethylene polymer.

- 4.1 The subject-matter of claim 29 is therefore novel (Article 33(2) PCT)  
The problem to be solved by the present invention may be regarded as that of improving the mechanical qualities and resistance of the product material.
- 4.2 The solution to this problem proposed in claim 29 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the above-cited reasons (see 2.2).
- 4.3 Claims 30-41 are dependent on claim 29 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**Re Item VII.**

- 5 Regarding the introductory statement to the description, it must be noted that the figure of the "continuation-in-part" does not exist under the PCT.
- 6 The reference to the "spirit" of the invention in page 11 of the description is in conflict with Art. 6 PCT, as understood under the PCT International Search and Preliminary Examination Guidelines, paragraph 5.30.
- 7 Under Rule 10.1 PCT, units of weights and measures shall be expressed in terms of the metric system, or also expressed in such terms if first expressed in terms of a different system. This rule has not been consistently followed throughout the

application, with units such as "ends per inch", "ounces per square yard" or "mils" being used in description and claims without a metric equivalent.

- 8 Following Rule 6.3(b) PCT and paragraph 5.11 of the PCT Guidelines, reference signs should be placed in parentheses after the features in the claims as aids to an easier understanding of the defined subject matter.
- 9 Claims 9-11 and 26-28 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claims attempt to define the subject-matter in terms of the result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result.